SUBJECT INDEX

VOLUME 11 (1971)

N-Acetoxy-*N*-acetaminofluorene, in *S. cerevisiae*, 327
N-Acetoxy-*N*-acetamino-*p-trans*-stilbene, in *S. cerevisiae*, 327
Aflatoxin B_1, in *D. melanogaster*, 430
N-Allyl-*N*-nitrosourea, in *S. cerevisiae*, 327
S,2-Aminoethylisothiuronium·Br·HBr, in male mice, 35
2-Aminopurine, differential mutation in *E. coli*, 181
5-Aminouracil, in rat kangaroo cells, 445
1-Aryl-3,3-dialkyltriazenes, in *D. melanogaster*, 397
Aspergillus nidulans, two genes controlling recombination and recovery from UV damage, 265
—, UV-damaged genes controlling recombination and recovery, 149

Bacillus subtilis, inactivation of genetic markers by an enzyme preferentially splitting G–G bonds, 434
Bacteriophage lambda, repair of alkylation-induced damage, 175
Bacteriophage T4, reversion of *amber* mutant by mutagenic DNA polymerase of, 438
Barley, nitrogen mustards, ethyleneimine and γ-rays, 339
N,*N*-Bis-(2-chloroethyl)-3-*p*-amino-1-phenylbutyric acid, in *S. cerevisiae*, 327
5-Bromodeoxyuridine, differential mutation in *E. coli*, 181
Burkitt tumour, cell line, cytogenetic effect of cyclophosphamide, 258
N-Butyl-*N*-nitrosourea, in *S. cerevisiae*, 327

Captan, specificities, 247
Cell killing, in mouse oocytes, 411
Chlorambucil, in *S. cerevisiae*, 327
Chloramphenicol, in male mice, 35
Chromosome, of rat kangaroo cells, differences in radiosensitivity, 445
—, sex, nondisjunction by elevated temperature in *D. melanogaster*, 347
Cow, X-irradiation during oogenesis, 9
Crepis capillaris, ring chromosome formation and somatic crossing-over, 187
Cyclophosphamide, cytogenetic effect of, in a Burkitt tumour cell line, 258
L-Cysteine, in the action of 8-hydroxychinolin-sulphate in human leucocyte chromosomes, 261

Diepoxybutane, in *S. cerevisiae*, 327
—, viability estimates in reverse mutation tests, 353
N,*N*-Diethyl-β-chloroethylamine hydrochloride, in *Hordeum vulgare*, 339
Diethyl sulphate, differential mutation in *E. coli*, 181
—, in *S. cerevisiae*, 327
—, spontaneous mutations in *ad-1* locus of *S. pombe*, 373
1,4-Di(methanesulphonoxy)butane, in mouse oocytes, 411
DNA, polymerase, mutagenic, of bacteriophage T4, reversion of an *amber* mutant by, 438
—, synthesis, unscheduled, chromosomal rejoining in the absence of, 256
Dog, X-irradiation during oogenesis, 9
Drosophila melanogaster, lethals by 1-aryl-3,3-dialkyltriazenes, 397
—, putative deletions in heterochromatin, 203
—, recessive lethals by aflatoxin B_1, 430
—, recessive lethals by viruses noninfectious to the host, 163
—, sex chromosome nondisjunction by elevated temperature, 347
—, sperm, LSD, 441
—, X-irradiation of mature oocytes, 391

Electronmicroscopy, X-ray-induced lesions in chromosomes of *V. faba*, 253
Enzyme, preferentially splitting G–G bonds, inactivation of genetic markers in *B. subtilis* by, 434
Escherichia coli, captan and pentachloronitrobenzene, 247
—, differential mutation of the β-galactosidase gene, 181
—, repair of alkylation-induced damage, 175
N-Ethylbis (β-chloroethyl) amine hydrochloride in *Hordeum vulgare*, 339
Ethyleneimine, in *Hordeum vulgare*, 339
—, in *S. cerevisiae*, 327
Ethyl methanesulphonate, differential mutation in *E. coli*, 181
—, in *E. coli*, 247
—, in *E. coli* and phage lambda, 175
—, in male mice, 35
—, in mouse oocytes, 411
—, in *S. cerevisiae*, 327
—, X-ray-induced mutation in Chinese hamster cell cultures, 23
N-Ethyl-*N*-nitrosourea, in *S. cerevisiae*, 327

N-Ethyl-*N*-nitrosourethane, in *S. cerevisiae*, 327

Feed, efficiency, in swine following paternal X-irradiation, 350

Gene, β-galactosidase, in *E. coli*, differential mutation, 181
Guinea-pig, male, X-irradiation, 45
—, X-irradiation during oogenesis, 9

Haemophilus influenzae, transforming DNA, UV sensitivity of, 293, 313
Hamster, Chinese, cells, response to *N*-methyl-*N'*-nitro-*N*-nitrosoguanidine, 421
—, —, X-ray-induced forward mutation in cell cultures, 23
—, golden, male, X-irradiation, 45
Heterochromatin, proximal, in *D. melanogaster*, deletions in, 203
Hordeum vulgare, nitrogen mustards, ethyleneimine and γ-rays, 339
Human, L-cysteine as protector against hydroxychinolinsulphate in leucocyte chromosomes, 261
—, X-irradiation during oogenesis, 9
8-Hydroxychinolinsulphate, L-cysteine as a protector against, in human leucocyte chromosomes, 261
Hydroxyurea, in *S. cerevisiae*, 327

ICR-170, in mouse oocytes, 411
—, spontaneous mutations in *ad-1* locus of *S. pombe*, 373
—, X-ray-induced mutation in Chinese hamster cell cultures, 23
ICR-191, in *S. cerevisiae*, 327
Influenza virus, lethals in *D. melanogaster*, 163
Inversions, paracentric, in mice, production and detection, 59
Irradiation, γ, deletions in proximal heterochromatin of *D. melanogaster*, 203
—, —, differential mutation in *E. coli*, 181
—, —, in *Hordeum vulgare*, 339
—, fast neutron, in mice, 97
—, ionizing and UV, in *S. cerevisiae*, 327
—, neutron, recessive lethals in mice, 125
—, UV, genes controlling recombination and recovery in *A. nidulans*, 149
—, —, in a proline-requiring mutant of *S. typhimurium*, 279
—, —, sensitive mutants of *S. pombe*, isolation and classification, 361
—, —, sensitivity of *H. influenzae* transforming DNA, 293, 313
—, —, two genes controlling recombination and recovery in *A. nidulans*, 265
—, —, viability estimates in reverse mutation tests, 353
—, X, achromatic lesions in chromosomes of *Vicia faba*, 253
—, —, chromosomal rejoining in rat kangaroo cells, 256
—, —, dominant lethals and aberrations in mammals, 45
Irradiation, X, (*continued*)
—, —, forward mutation in Chinese hamster cell cultures, 23
—, —, in male mice, lethal mutation in offspring, 215
—, —, of mature oocytes of *D. melanogaster*, 391
—, —, during oogenesis in mammals, 9
—, —, paternal, in swine, feed efficiency, 350
—, —, production and detection of paracentric inversions in mice, 59
—, —, spermatogonial stem cell renewal in the mouse, 1
—, —, translocations in mouse spermatogonia, 71
—, X or Cs^{137}, in male mice, 35
—, X or γ, in the mouse, complementation mapping, 107
—, X, γ and fast neutrons, ring chromosome formation in *Crepis capillaris*, 187
Isopropyl methanesulphonate, in male mice, 35
—, in mouse oocytes, 411

Kidney, cells, of rat kangaroo, chromosomal rejoining in absence of unscheduled DNA synthesis, 256

Leucocyte, chromosomes, human, L-cysteine as protector against hydroxychinolinsulphate, 261
LSD, in *D. melanogaster* sperm, 441
Lysergic acid diethylamide, in *D. melanogaster* sperm, 441

Mammalian Radiation Genetics, Symposium on, summary and synthesis, 133
N-Methylbis(β-chloroethyl)amine hydrochloride, in *Hordeum vulgare*, 339
Methyl methanesulphonate, in *E. coli*, 247
—, in *E. coli* and phage lambda, 175
—, in male mice, 35
—, in mouse oocytes, 411
—, in *S. cerevisiae*, 327
N-Methyl-*N'*-nitro-*N*-nitrosoguanidine, in Chinese hamster cells, 421
—, differential mutation in *E. coli*, 181
—, in *E. coli*, 247
—, inducing UV-sensitive mutants of *S. pombe*, 361
—, in mouse oocytes, 411
—, in *S. cerevisiae*, 327
—, spontaneous mutations in *ad-1* locus of *S. pombe*, 373
—, X-ray-induced mutation in Chinese hamster cell cultures, 23
N-Methyl-*N*-nitrosocaproamide, in *S. cerevisiae*, 327
N-Methyl-*N*-nitrosourea, in *S. cerevisiae*, 327
N-Methyl-*N*-nitrosourethane, in *S. cerevisiae*, 327
Mitotic gene conversion, in *S. cerevisiae*, 327
Monkey, X-irradiation during oogenesis, 9
Mouse, fast neutron irradiation, 97
—, house, natural mutation rates, 89
—, male, irradiated, lethal mutation in offspring, 215

Mouse, male, (*continued*)
—, —, radiation- and chemically-induced mutations, 35
—, —, X-irradiation, 45
—, oocytes, dominant lethal mutations and cell killing, 411
—, paracentric inversions, production and detection, 59
—, radiation-induced mutations, 107
—, recessive lethals, methods to study, 125
—, spermatogonia, radiation-induced translocations, 71
—, spermatogonial stem cell renewal, 1
—, X-irradiation during oogenesis, 9
Mutagen, *N*-acetoxy-*N*-acetaminofluorene, in *S. cerevisiae*, 327
—, *N*-acetoxy-*N*-acetamino-*p-trans*-stilbene, in *S. cerevisiae*, 327
—, aflatoxin B_1, in *D. melanogaster*, 430
—, *N*-allyl-*N*-nitrosourea, in *S. cerevisiae*, 327
—, *S*,2-aminoethylisothiuronium·Br·HBr, in male mice, 35
—, 2-aminopurine, differential mutation in *E. coli*, 181
—, 5-aminouracil, in rat kangaroo cells, 445
—, 1-aryl-3,3-diakyltriazenes, in *D. melanogaster*, 397
—, *N*,*N*-bis-(2-chloroethyl)-3-*p*-amino-1-phenylbutyric acid, in *S. cerevisiae*, 327
—, 5-bromodeoxyuridine, differential mutation in *E. coli*, 181
—, *N*-butyl-*N*-nitrosourea, in *S. cerevisiae*, 327
—, captan, specificities, 247
—, chlorambucil, in *S. cerevisiae*, 327
—, chloramphenicol, in male mice, 35
—, cyclophosphamide, cytogenetic effect of, in a Burkitt tumour cell line, 258
—, diepoxybutane, in *S. cerevisiae*, 327
—, —, viability estimates in reverse mutation tests, 353
—, *N*,*N*-diethyl-β-chloroethylamine hydrochloride, in *Hordeum vulgare*, 339
—, diethyl sulphate, differential mutation in *E. coli*, 181
—, —, in *S. cerevisiae*, 327
—, —, spontaneous mutations in *ad-1* locus of *S. pombe*, 373
—, 1,4-di(methanesulphonoxy)butane, in mouse oocytes, 411
—, *N*-ethylbis(β-chloroethyl)amine hydrochloride, in *Hordeum vulgare*, 339
—, ethyleneimine, in *Hordeum vulgare*, 339
—, —, in *S. cerevisiae*, 327
—, ethyl methanesulphonate, differential mutation in *E. coli*, 181
—, —, in *E. coli*, 247
—, —, in *E. coli* and phage lambda, 175
—, —, in male mice, 35
—, —, in mouse oocytes, 411
—, —, in *S. cerevisiae*, 327
—, —, X-ray-induced forward mutation in Chinese hamster cell cultures, 23
—, *N*-ethyl-*N*-nitrosourea, in *S. cerevisiae*, 327
—, *N*-ethyl-*N*-nitrosourethane, in *S. cerevisiae*, 327
Mutagen, (*continued*)
—, 8-hydroxychinolinsulphate, L-cysteine as a protector against, in human leucocyte chromosomes, 261
—, hydroxyurea, in *S. cerevisiae*, 327
—, ICR-170, in mouse oocytes, 411
—, —, spontaneous mutations in *ad-1* locus of *S. pombe*, 373
—, —, X-ray-induced mutation in Chinese hamster cell cultures, 23
—, ICR-191, in *S. cerevisiae*, 327
—, isopropyl methanesulphonate, in male mice, 35
—, —, in mouse oocytes, 411
—, LSD, in *D. melanogaster* sperm, 441
—, *N*-methylbis(β-chloroethyl)amine hydrochloride, in *Hordeum vulgare*, 339
—, methyl methanesulphonate, in *E. coli*, 247
—, —, in *E. coli* and phage lambda, 175
—, —, in male mice, 35
—, —, in mouse oocytes, 411
—, —, in *S. cerevisiae*, 327
—, *N*-methyl-*N'*-nitro-*N*-nitrosoguanidine, in Chinese hamster cells, 421
—, —, differential mutation in *E. coli*, 181
—, —, in *E. coli*, 247
—, —, inducing UV-sensitive mutants of *S. pombe*, 361
—, —, in mouse oocytes, 411
—, —, in *S. cerevisiae*, 327
—, —, spontaneous mutations in *ad-1* locus of *S. pombe*, 373
—, —, X-ray-induced mutation in Chinese hamster cell cultures, 23
—, *N*-methyl-*N*-nitrosocaproamide, in *S. cerevisiae*, 327
—, *N*-methyl-*N*-nitrosourea, in *S. cerevisiae* 327
—, *N*-methyl-*N*-nitrosourethane, in *S. cerevisiae*, 327
—, myleran, in mouse oocytes, 411
—, 4-nitroquinoline-*N*-oxide, in *E. coli*, 247
—, nitrosoethylurethane, viability estimates in reverse mutation tests, 353
—, 1-nitroso-imidazolidone-2, in *S. cerevisiae*, 327
—, nitrosomethylurethane, in *E. coli*, 247
—, —, viability estimates in reverse mutation tests, 353
—, nitrous acid, in *S. cerevisiae*, 327
—, pentachloronitrobenzene, specificities, 247
—, 1-phenyl-3,3-dimethyltriazene, in *D. melanogaster*, 397
—, propanesultone, in *S. cerevisiae*, 327
—, β-propiolactone, in *S. cerevisiae*, 327
—, *n*-propyl methanesulphonate, in male mice, 35
—, —, in mouse oocytes, 411
—, *N*-propyl-nitrosourea, in *S. cerevisiae*, 327
—, 1-(pyridyl-3)-3,3-dimethyltriazene, lethals in *D. melanogaster*, 397
—, 1-(pyridyl-3-*N*-oxide)-3,3-dimethyltriazene, lethals in *D. melanogaster*, 397
—, tienimon, in *S. cerevisiae*, 327
—, triethylenemelamine, in mammals, 45

Mutagen, triethylenemelamine, (*continued*)
—, —, in mouse oocytes, 411
—, tris(β-chloroethyl)amine hydrochloride, in *Hordeum vulgare*, 339
—, —, in *S. cerevisiae*, 327
—, 2,3,5-tris-(ethyleneimino)benzoquinone-4, in *S. cerevisiae*, 327
Mutant, *amber*, reversion by mutagenic DNA polymerase of bacteriophage T4, 438
—, *proB401*, of *S. typhimurium*, changes in pattern of reversion, 279
—, *uvsD* and *uvsE*, of *A. nidulans*, recombination behaviour and X-ray sensitivity, 265
Myleran, in mouse oocytes, 411

Neurospora crassa, viability estimates in tests for reverse mutations, 353
4-Nitroquinoline-*N*-oxide, in *E. coli*, 247
Nitrosoethylurethane, viability estimates in reverse mutation tests, 353
1-Nitroso-imidazolidone-2, in *S. cerevisiae*, 327
Nitrosomethylurethane, in *E. coli*, 247
—, viability estimates in reverse mutation tests, 353
Nitrous acid, in *S. cerevisiae*, 327
Nuclear polyhedrosis virus, lethals in *D. melanogaster*, 163

Oocytes, mature, of *D. melanogaster*, X-irradiation, 391
—, mouse, dominant lethal mutations and cell killing, 411
Oogenesis, X-irradiation in mammals, 9

Pentachloronitrobenzene, specificities, 247
1-Phenyl-3,3-dimethyltriazene, lethals in *D. melanogaster*, 397
Pig, X-irradiation during oogenesis, 9
Poliomyelitis virus, lethals in *D. melanogaster*, 163
Potorous tridactylis, chromosomal rejoining in absence of unscheduled DNA synthesis, 256
—, chromosome cells, differences in radiosensitivity, 445
Propanesultone, in *S. cerevisiae*, 327
β-Propiolactone, in *S. cerevisiae*, 327
n-Propyl methanesulphonate, in male mice, 35
—, in mouse oocytes, 411
N-Propyl-*N*-nitrosourea, in *S. cerevisiae*, 327
1-(Pyridyl-3)-3,3-dimethyltriazene, lethals in *D. melanogaster*, 397
1-(Pyridyl-3-*N*-oxide)-3,3-dimethyltriazene, lethals in *D. melanogaster*, 397

Rabbit, male, X-irradiation, 45
—, X-irradiation during oogenesis, 9
Radiation Genetics, Mammalian, Symposium on, summary and synthesis, 133
Radiosensitivity, difference in, of chromosomes of rat kangaroo cells, 445
Rat, X-irradiation during oogenesis, 9
Rat kangaroo, chromosomal rejoining in absence of unscheduled DNA synthesis, 256
—, chromosome cells, differences in radiosensitivity, 445
Reverse mutations, tests, the problem of viability estimates, 353
Ring chromosome formation, mechanism, in *Crepis capillaris*, 187

Saccharomyces cerevisiae, mitotic gene conversion, 327
Salmonella typhimurium, changes in pattern of reversion in proline-requiring mutant, 279
Schizosaccharomyces pombe, *ad-1* locus, spontaneous mutation, 373
—, isolation and classification of UV-sensitive mutants, 361
Sex chromosome, nondisjunction by elevated temperature, 347
Somatic crossing-over, in *Crepis capillaris*, 187
Sperm, *D. melanogaster*, effect of LSD, 441
Spermatogonia, of mouse, radiation-induced translocations, 71
—, stem cell renewal in the mouse, 1
Spontaneous mutation, in the house mouse, 89
—, in *S. pombe*, in *ad-1* locus, 373
Stem cell, renewal, in mouse spermatogonia, 1
Swine, feed efficiency following paternal X-irradiation, 350
Symposium, on Mammalian Radiation Genetics, summary and synthesis, 133

Temperature, elevated, causing sex chromosome nondisjunction, 347
Testing, for recessive lethals in mice, 125
Tipula iridescent virus, lethals in *D. melanogaster*, 163
Trenimon, in *S. cerevisiae*, 327
Triethylenemelamine, in mammals, 45
—, in mouse oocytes, 411
Tris(β-chloroethyl)amine hydrochloride, in *Hordeum vulgare*, 339
—, in *S. cerevisiae*, 327
2,3,5-Tris-(ethyleneimino)-benzoquinone-4, in *S. cerevisiae*, 327
Tumour, Burkitt, cell line, cytogenetic effect of cyclophosphamide, 258

Viability estimates, in tests for reverse mutations, 353
Vicia faba, scanning electronmicroscopy of achromatic lesions induced by X-rays, 253
Virus, noninfectious for the host, producing recessive lethals in *D. melanogaster*, 163